

Specification Amendments:

Page 1, before paragraph [0001], change the insert requested in the Preliminary Amendment filed July 22, 2006 to read as follows:

Cross Reference to Related Application

This application is the National Stage filing under 35 U.S.C. 371 of International Application No. PCT/EP03/07757, filed July 17, 2003, and claims the priority of German patent application No. DE 102 35 527.4, filed August 3, 2002.

Background of the Invention

Page 2, amend paragraph [009] to read as follows:

[0009] This object is achieved according to a first aspect of the invention by a device for the redundant voltage supply of safety-relevant systems, in particular in motor vehicles, which has the features of claim 1

at least one first drive device, one second drive device and one third drive device, each of these drive devices being designed to drive relays or switches in a relay or switching unit for switching over voltage supplies of safety-relevant systems, and wherein:

the drive devices are connected to a communication channel,

the first and second drive devices each have a device for monitoring a voltage applied to the safety-relevant systems,

the first drive device can trigger a switching process of the relay or switching unit and output a request message (Anf1) to the communication channel if the device for monitoring a voltage applied to the safety-relevant systems detects that no voltage is applied;

the second drive device has a device for checking whether the first drive device has driven and switched the relay or switching unit, and, if the device for checking determines that the first drive device has not driven or has not switched the relay or switching unit, and the device for monitoring a voltage applied to the safety-relevant systems detects that no voltage is applied, the second drive device can trigger a switching process of the relay or switching unit and, if it is not possible to trigger a switching process of the relay or switching unit, can output a further request message (Anf2) to the communication channel, and,

the third drive device can receive from the communication channel the request messages (Anf1, Anf2) from the first and second drive devices and can trigger a switching process of the relay unit when both request messages (Anf1, Anf2) are received.

The above object is generally achieved according to a second aspect of the invention by a method for the redundant voltage supply of safety-relevant systems, particularly in motor vehicles, which has the features of claim 3 including the following steps:

(S1) a first drive device monitors via a first line whether a voltage can be detected across one or more safety-relevant systems, and continues the monitoring if this is the case;

(S2) if it is determined in step S1 that no voltage is applied to one or more safety-relevant systems, the first drive device drives a relay or switching unit by means of a first control signal so that a voltage is again applied to the safety-relevant system or systems;

(S3) the first drive device outputs to a communication channel a first request message which states that it is necessary to switch over at least one relay of the relay unit in order to supply voltage;

(S4) a second drive device receives the first request message;

(S5) the second drive device checks whether the first drive device has successfully driven/switched over the relay or switching unit; return to step (S1) if this is the case;

(S6) the second drive device determines via a second line whether a voltage is applied to one or more safety-relevant systems; return to step (S1) in the affirmative;

(S7) check whether it is possible for the second drive device to drive/switch the relay or switching unit, and in the negative case;

(S8) the second drive device drives/switches the relay or switching unit by means of a second control signal if driving/switching is judged to be possible in step (S7), and then return to step (S1);

(S9) the second drive device outputs a second request message to the communication channel if it is not possible for the second drive device to drive/switch the relay or switching unit for whatever reasons, including due to an interruption in the line for the second control signal;

(S10) a third drive device receives the second request message from the second drive device together with the first request message from the first drive device;

(S11) the third drive device drives/switches the relay or switching unit by means of a third control signal; and then return to step (S1).

Page 3, amend paragraph [0017] to read as follows:

[0017] In Fig. 1, 11 denotes a CAN bus as an example of communication channels via which communication signals are transmitted. The device according to the invention for the redundant voltage supply has a first drive device 1 which monitors for the presence of a voltage across one or more safety-relevant system or systems 5 via a line Sp1 and, if no voltage is present there, can drive one or more relays or switches contained in a relay or switching unit 4 by means of a control signal St1, so that a voltage is then applied to the safety-relevant system or systems 5 again via a line St4. In addition, the first drive device 1 outputs a request message Anf1 to the CAN bus 11 if one or more relays or switches in the relay or switching unit 4 is to be driven in order to re-establish a voltage supply to the safety-relevant system or systems 5. These relays of the relay unit 4 switch on and off a voltage supply for safety-relevant electrical systems 5, for example an electrohydraulic brake (EHB), an electrohydraulic steering system (EHL) etc..